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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,951	05/04/2001	Gary V. Stephenson	7784-000214	9281
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HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER FIELDS, COURTNEY D	
			ART UNIT 2137	PAPER NUMBER

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,951

Applicant(s)

STEPHENSON ET AL.

Examiner

Courtney D. Fields

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claim 1 has been amended.
2. Claims 1-21 are pending.

Response to Arguments

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection in view of Le et al. (US Patent No. 6,711,164).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6-7,10,12-15,17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olds et al. (US Patent No. 6,691,274) in view of Le et al. (US Patent No. 6,711,164).

Referring to the rejection of claim 1, Olds et al. discloses a method of transmitting data between a ground segment and a plurality of airborne segments comprising:

a forward link including: (See Column 2, lines 62-66)

obtaining a first data stream at the ground segment, the first data stream including a data header having routing information and a data payload having other information; (See Column 1, lines 62-67, Column 2, lines 1-8,17-53)

sending the packet to the plurality of airborne segments and if the routing information in the data header matches an address of at least one of the plurality of airborne segments, (See Column 4, lines 44-67, Column 5, lines 1-5)

and a return link including: (See Column 5, lines 9-37)

obtaining a second data stream at least at one of the plurality of airborne segments (See Column 4, lines 2-34)

and de-compressing the bulk compressed second data stream at the ground segment (See Column 5, lines 38-54)

However, Olds et al. fails to disclose a packet-compressing feature and an uncompressed data header. Le et al. discloses the claimed limitations of

sending a packet compressed first data stream (See Column 4, lines 41-56, and Figure 3)

the data header in an uncompressed state to maintain the routing information and the data payload in a compressed state; (See Column 4, lines 16-23, 64-67, Column 5, lines 1-7)

sending the bulk compressed second data stream to the first ground segment, (See Column 4, lines 24-35)

packet compressing the first data stream into a packet compressed first data stream including: (See Column 4, lines 41-63)

de-compressing the packet compressed first data stream (See Column 4, lines 64-67, Column 5, lines 1-7)

bulk compressing the second data stream into a compressed second data stream including: all of the second data stream in a compressed state (See Column 5, lines 8-22)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Olds et al. GPS transmission method with Le et al. packet compression system because this will improve data header compression efficiency to become reduced within a plurality of packets transmitted over a communication channel. (See Le et al., Column 2, lines 51-53)

Referring to the rejection of claim 2, (Olds et al. as modified by Le et al.) discloses framing the first data stream after the step of packet compressing the first data stream and prior to the step of sending the packet compressed first data stream to the plurality of airborne segments (See Le et al., Column 4, lines 41-56, and Figure 3)

Referring to the rejection of claim 3, Olds et al. discloses spreading step of packet compressing the first data stream and the first data stream after the prior to the step of sending the packet compressed first data stream to the plurality of airborne segments (See Olds et al., Column 2, lines 45-53)

Referring to the rejection of claim 4, Olds et al. discloses spreading step further comprises applying a forward error correction code to said first data stream (See Olds et al., Column 3, lines 46-64)

Referring to the rejection of claim 6, Olds et al. discloses spreading the second data stream after the step of bulk compressing the second data stream and

Art Unit: 2137

prior to the step of sending the bulk compressed second data stream to the first ground segment (See Olds et al., Column 3, lines 15-45, See Le et al., Column 4, lines 24-35)

Referring to the rejection of claim 7, Olds et al. discloses spreading step further comprises applying a forward error correction code to the second data stream (See Olds et al., Column 6, lines 29-54)

Referring to the rejection of claim 10, Olds et al. discloses de-compressing the packet compressed first data stream at least one of the plurality of airborne segments further comprises packet de-compressing the first data stream (See Le et al., Column 4, lines 64-67, Column 5, lines 1-7)

Referring to the rejection of claim 12, Olds et al. discloses de-spreading the first data stream prior to the step of de-compressing the first data stream at one of the plurality of airborne segments (See Olds et al., Column 5, lines 23-37)

Referring to the rejection of claim 13, Olds et al. discloses de-spreading step further comprises applying an inverse forward error correction code to the first data stream (See Olds et al., Column 6, lines 19-28)

Referring to the rejection of claim 14, Olds et al. discloses de-framing the first data stream prior to the step of de-compressing the first data stream at one of the plurality of airborne segments (See Olds et al., Column 5, lines 55-65)

Referring to the rejection of claim 15, Olds et al. discloses de-compressing the bulk compressed second data stream at the ground segment further comprises bulk de-compressing the second data stream (See Le et al., Column 4, lines 64-67, Column 5, lines 1-7, 8-22)

Referring to the rejection of claim 17, Olds et al. discloses de-spreading the second data stream prior to the step of de-compressing the second data stream at the ground segment (See Olds et al., Column 6, lines 12-28)

Referring to the rejection of claim 19, Olds et al. discloses de-spreading step further comprises applying an inverse forward error correction code to the second data stream (See Olds et al., Column 4, lines 19-43)

Referring to the rejection of claim 20, Olds et al. discloses packet encrypting the first data stream prior to the step of sending the first data stream to the plurality of airborne segments (See Olds et al., Column 4, lines 44-63)

Referring to the rejection of claim 21, Olds et al. discloses bulk encrypting the second data stream prior to the step of sending the second data stream to the ground segment (See Olds et al., Column 4, lines 64-67, Column 5, lines 1-22)

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5,8-9,11,16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olds et al. (U.S. Patent No. 6, 691, 274) and Le et al. (U.S. Patent No. 6,711,164) as applied to claim 1 above, and further in view of Campanella (U.S. Patent No. 5,835,487). Olds et al. as modified by Le et al. discloses the invention as substantially claimed above. However, neither Olds et al. nor Le et al. discloses a

modulating, demodulating, or a chipping code. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combine Olds et al.'s method for error correction and Le et al.'s header compression efficiency method with Campanella's satellite direct radio broadcast system in order to provide a real-time individual uplink with direct access to the satellite preventing unauthorized users from receiving the data which is streamed across the direct audio broadcast system. (See Campanella, Column 1, lines 43-58)

Referring to the rejection of claim 5, (Olds et al. and Le et al. as modified by Campanella) discloses modulating said first data stream after said step of packet compressing said first data stream and prior to said step of sending said packet compressed first data stream to the plurality of airborne segments (See Campanella, Column 5, lines 6-11)

Referring to the rejection of claim 8, (Olds et al. and Le et al. as modified by Campanella) discloses spreading step further comprises applying a chipping code to the second data stream (See Campanella, Column 9, lines 66-67, Column 10, lines 1-5)

Referring to the rejection of claim 9, (Olds et al. and Le et al. as modified by Campanella) discloses modulating the second data stream after the step of bulk compressing the second data stream and prior to the step of sending the bulk compressed second data stream to the ground segment (See Campanella, Column 8, lines 30-47)

Referring to the rejection of claim 11, (Olds et al. and Le et al. as modified by Campanella) discloses de-modulating the first data stream prior to the step of de-

compressing the first data stream at one of the plurality of airborne segments (See Campanella, Column 4, lines 66-67, Column 5, lines 1-6)

Referring to the rejection of claim 16, (Olds et al. and Le et al. as modified by Campanella) discloses de-modulating the second data stream prior to the step of decompressing said second data stream at the ground segment (See Campanella, Column 5, lines 35-62)

Referring to the rejection of claim 18, (Olds et al. and Le et al. as modified by Campanella) discloses de-spreading step further comprises applying an inverse chipping code to the second data stream (See Campanella, Column 10, lines 6-17)

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2137

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney D. Fields whose telephone number is 571-272-3871. The examiner can normally be reached on Mon - Thurs. 6:00 - 4:00 pm; off every Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on 571-272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CDF

cdf

September 14, 2005

E. Moise
EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER